

# Evidence Based Diagnosis and Management of Obesity

Provider Training  
NMCSD Weight Management Clinical Quality Team  
July 2006

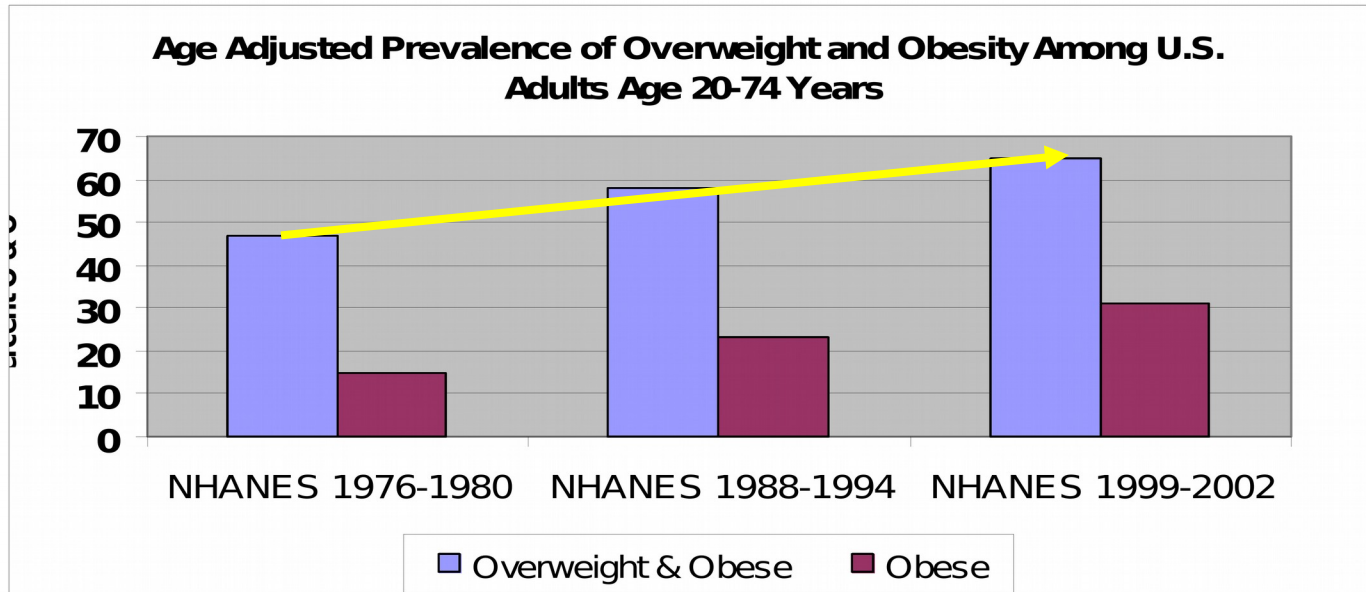
# NMCSD Weight Management Clinical Quality Team

- Define NMCSD's adult, active duty and beneficiary overweight and obese population.
- Utilize NHLBI Guidelines and Healthy People 2010 to define outcome metrics.
- Develop / Implement / Educate and Sustain the NMCSD's Weight Management Clinical Registry.
- Develop and Implement the Weight Management point of care tools.

# WM Program Purpose

- Facilitate interdisciplinary evidence-based decision-making.
- Provide efficient and systematic identification, tracking, and monitoring of Overweight & Obese (O&O) patients.
- Promote proactive, primary, secondary and tertiary prevention efforts.
- Improve communication and coordination of care between various levels of staff providing care to patients and their families.

# Burden of Disease



- 65 % of U.S. adults (age  $\geq 20$  yrs) are overweight or obese.
  - 30 % of U.S. adults are obese, >60 million adults.
  - 16 % of children (age 6-19 yrs) are overweight, >9 million kids
- CDC 2005

# Definitions

- Body Mass Index – Estimate of total body fat accurate for most patients in a clinical setting.
- BMI = *weight (kg) / height squared (m<sup>2</sup>)*

	ICD-9	Classes	BMI
Underweight			<18.5
Normal			18.5 - 24.9
Overweight	278.02		25.0 - 29.9
Obesity (NOS)	278.00	I	≥30.0 - 34.9
	278.01	II	35.0 - 39.9

# Why Diagnose O&O

## Cost associated with O&O

- US Govt (1998) Direct medical cost = \$92.6 billion or 9.1% of total US medical expenditure.<sup>1</sup>
- 36% increase in inpatient and outpatient spending<sup>2</sup>
- 77% increase in medication utilization<sup>2</sup>
- US Navy (1993-1998) annual avoidable inpatient costs = \$ 5,842,627 for the top 10 obesity related DRG's<sup>3</sup>
- US Air Force (1997) total excess body wt-attributable costs = 22.8 million per year.<sup>4</sup>

# Why Diagnose O&O

## Mortality

- Severe obesity decreases life expectancy 5-20 yrs.  
-JAMA
  - Mortality increases with BMI above 25 kg/m.
  - At BMI  $\geq 30$  kg/m<sup>2</sup> the rate of all cause mortality especially from CVD, increases by 50 to 100 %\*.  
-NHLBI
- \*Compared to persons with BMI = 20 to-25 kg/m<sup>2</sup>

# Why Diagnose O&O

## Morbidity

- The following conditions increase with **BMI > 20**

**Figure 1.3 Health Risks Associated with Obesity<sup>13,5</sup>**

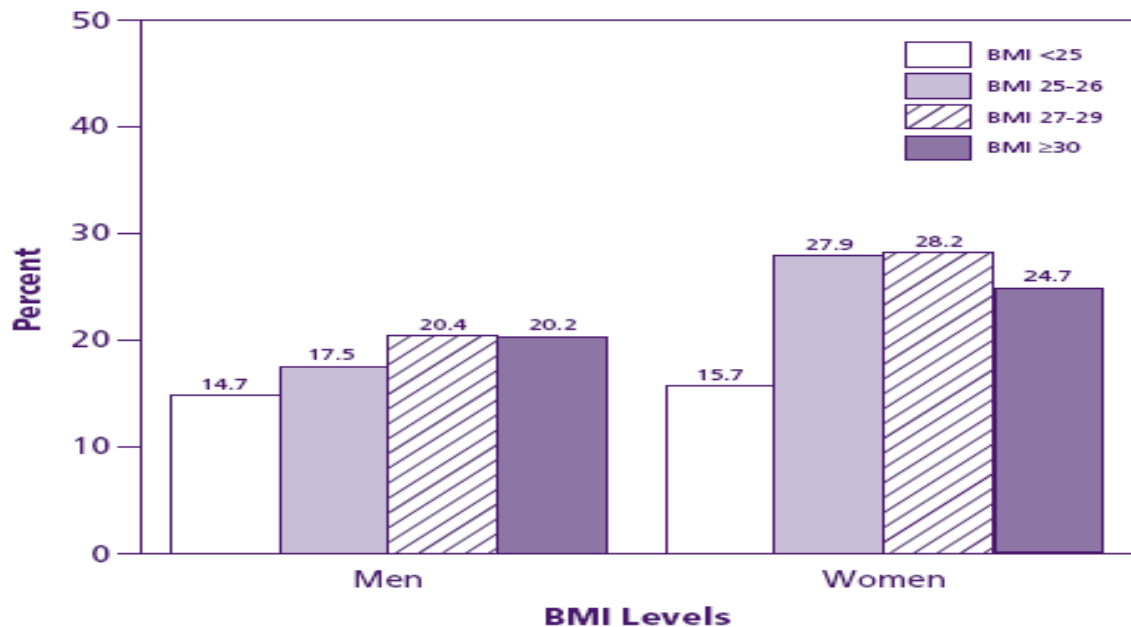
- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>• Premature death</li><li>• Insulin resistance, Type 2 diabetes</li><li>• Hyperlipidemia</li><li>• Hypertension</li><li>• Coronary heart disease</li><li>• Congestive heart failure</li><li>• Stroke</li><li>• Some types of cancer (endometrial, colon, kidney, gallbladder, postmenopausal breast cancer)</li><li>• Gastroesophageal reflux disease (GERD)</li><li>• Gallstones, gallbladder disease</li></ul> | <ul style="list-style-type: none"><li>• Gout</li><li>• Nonalcoholic fatty liver disease</li><li>• Pregnancy complications</li><li>• Menstrual irregularities</li><li>• Bladder control problems, stress incontinence</li><li>• Osteoarthritis</li><li>• Obstructive sleep apnea, respiratory problems</li><li>• Infertility</li><li>• Psychological disorders (eg, depression, eating disorders, distorted body image, low self-esteem)</li></ul> |
|--|---|



# Why Diagnose O&O

## Increased Prevalence of High Total Cholesterol

BMI is associated with an increased prevalence of high total cholesterol  $\geq 240$ .



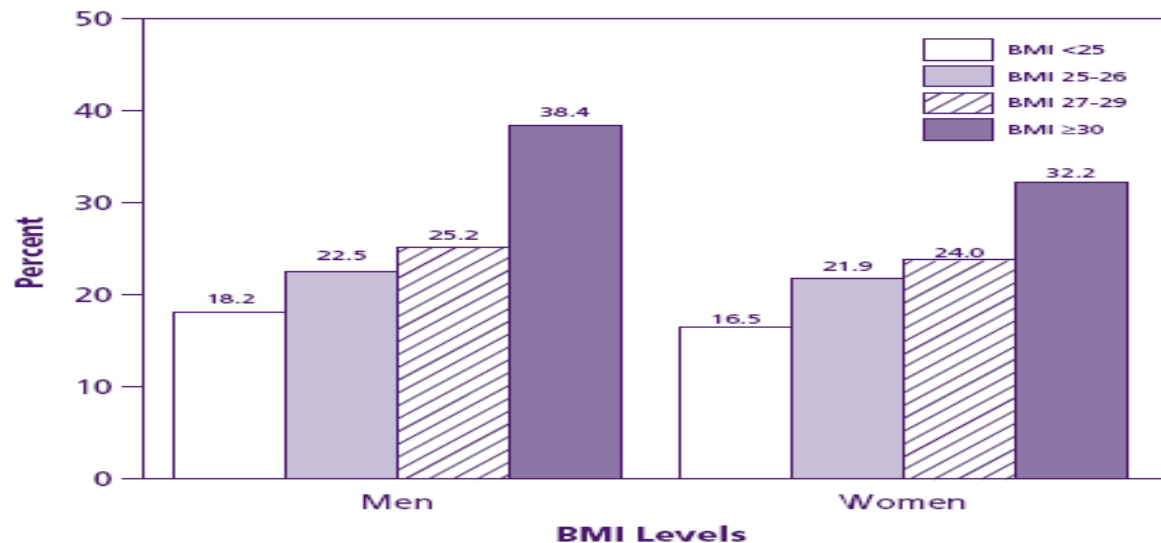
\*Defined as  $\geq 240$  mg/dL

Source: Brown C. et al. Body Mass Index and the Prevalence of Risk Factors for Cardiovascular Disease (submitted for publication).

# Why Diagnose O&O

## Increased Prevalence of Hypertension

High blood pressure increases progressively with higher levels of BMI.



\* Defined as mean systolic blood pressure  $\geq 140$  mm Hg, mean diastolic as  $\geq 90$  mm Hg, or currently taking antihypertensive medication.

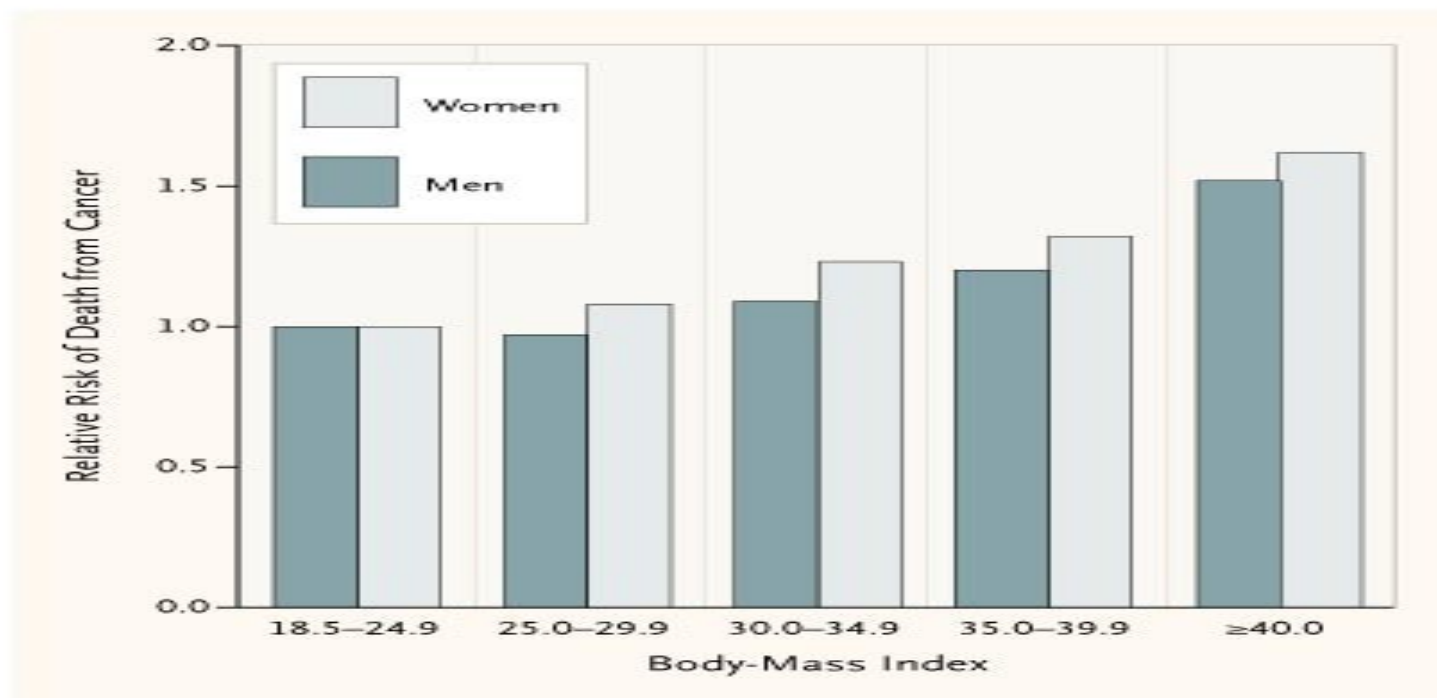
Source: Brown C. et al. Body Mass Index and the Prevalence of Risk Factors for Cardiovascular Disease (submitted for publication).

HTN defined as  $\geq 140/90$  or taking HTN meds

# Why Diagnose O&O

## Increased Cancer Risk\*

BMI is associated with death due to cancer of the esophagus, colon, rectum, liver, gallbladder, pancreas, kidneys, Non-Hodgkin's lymphoma, and multiple myeloma.



\* Relative to patients with normal BMI

# Definitions

## Waist circumference

- Provides an independent prediction of risk for diabetes, coronary artery disease, and hypertension.

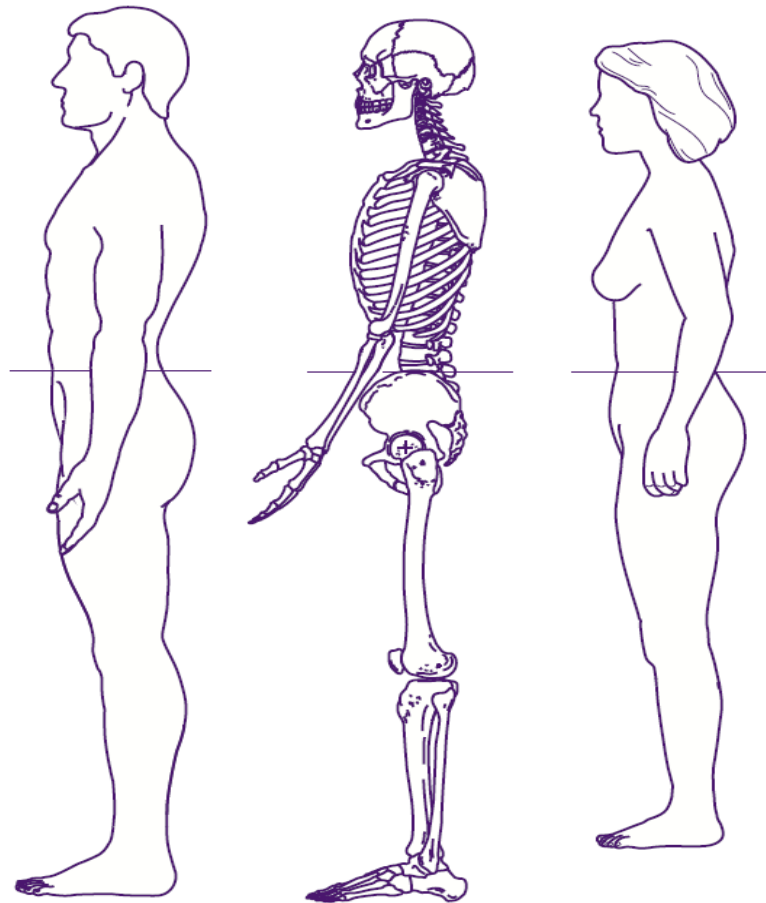
High Risk*	
Men	102 cm, 40 inches
Women	88 cm, 35 inches

\* A high waist circumference is associated with an increased risk for type 2 diabetes, dyslipidemia, hypertension, and CVD in patients with a BMI between 25 and 34.9.

# Definitions

## Waist Circumference measurement

Figure 5. Measuring tape position for waist (abdominal) circumference



# Why Diagnose O&O

## Categorizing Disease Risk

Overweight or obesity and abdominal obesity significantly increase risk\* for: Type 2 diabetes, Hypertension, and CVD

\* relative to patients with normal BMI and waist circumference

	BMI	Waist: M<40, W<35	Waist: M>40, W>35
Underweight	<18.5	<b>Disease Risk Status</b>	
Normal*	18.5-24.9	--	**
Overweight	25.0-29.9	Increased	High
Obesity	30.0-34.9	High	Very High
	35.0-39.9	Very High	Very High
Extreme (Morbid)	$\geq 40.0$	Extremely High	Extremely High

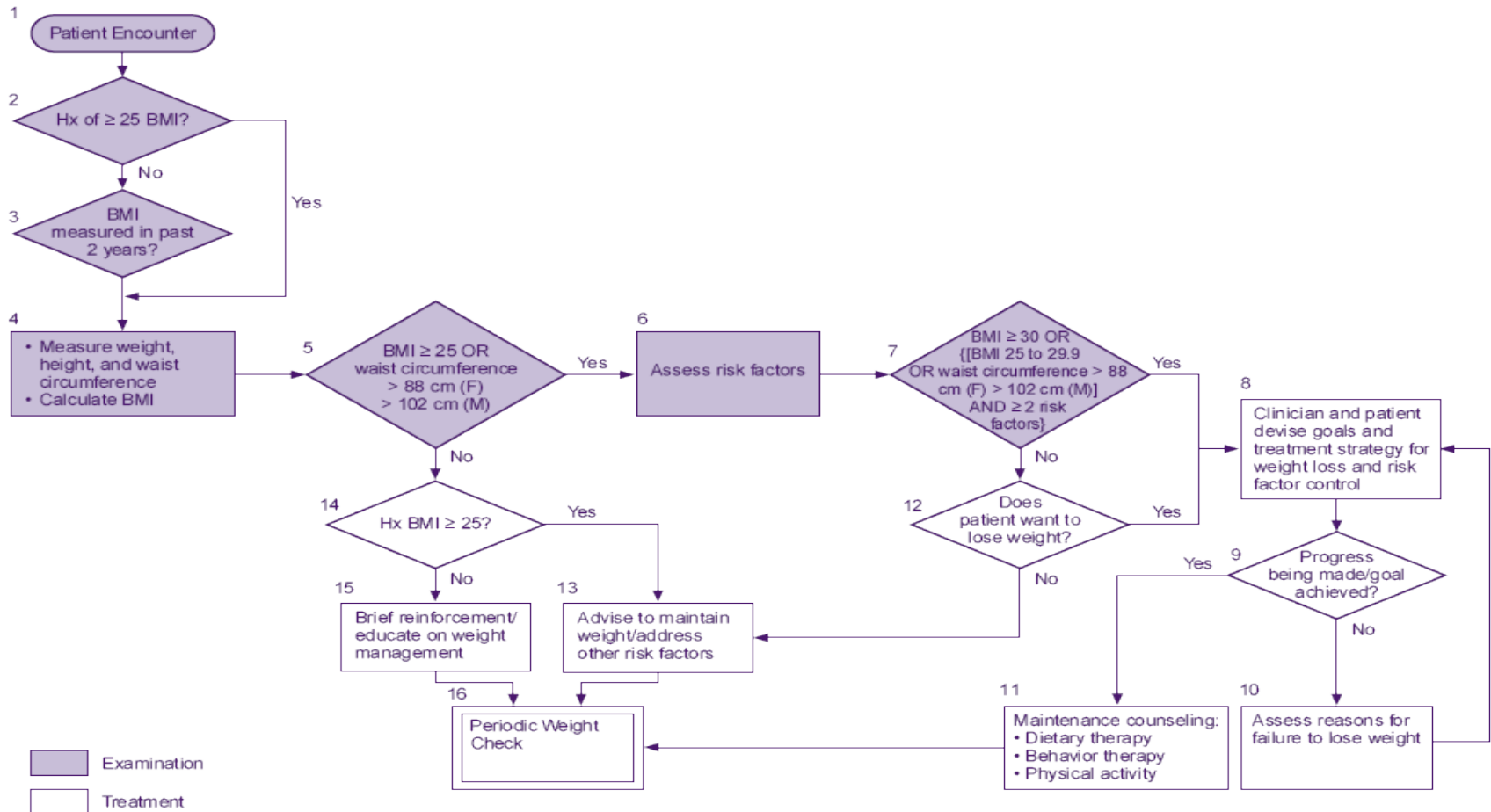
\*\* Increased waist circumference can be a marker for increased risk in persons of normal weight.

# Who to Treat

- Risk Status Assessment
  - BMI: degree of overweight or obesity
  - Waist circ: the presence of abdominal obesity
  - Concomitant CVD risk factors or comorbidities.
- Treat patients at High Risk
  1. All Obese patients
  2. Overweight patients with High Waist circumference
  3. Overweight patients with 2 or more CVD risk factors

# Treatment Algorithm

Figure 6. Treatment Algorithm\*



\* This algorithm applies only to the assessment for overweight and obesity and subsequent decisions based on that assessment. It does not include any initial overall assessment for cardiovascular risk factors or diseases that are indicated.



# The 3 Minute Intervention

- First, tell your patient that you are concerned about his/her weight:

“I’m concerned about your weight because I think it is causing (or will cause) health problems for you. Do you think that your weight is causing problems for you?”

- Advise your patient to lose weight. Praise any efforts at increasing physical activity and watching what he/she eats.

“Have you ever tried to lose weight?”

“I can work with you to develop a weight loss plan.”

# The 3 Minute Intervention

- If your patient is interested in weight loss, share handouts and questionnaires to review later
  - Graphing Your Weight Gain chart
  - Eating Pattern Questionnaire
  - Weight Loss Questionnaire
- Schedule a follow up appt for weight management
  - NMCSD Nutrition Clinic, Health Promotion Dept or the primary care provider.
  - Discuss and review the questionnaires at the F/U
  - Develop a plan for weight management
- If your patient is *currently* not interested in weight loss, continue at **every visit** to educate him/her on the impact of weight on health.

# The Intervention

- Diagnosis and discussion = Intervention
  - Early identification and prevention is the key
  - Positive behavior change is achievable with 3-5 min contact
- No intervention = continued weight gain
- 3 pronged patient program = success
  - physical activity
  - nutrition training
  - behavior modification
- Only high intensity intervention has been shown to be effective.
- High intensity = 2 or more, person to person sessions per month X 3 months
  - Consult specialists
  - Use all available assets

# The 3 Components

- Behavior Modification
- Nutrition
- Physical Activity

# Behavior Modification

# Principles of Effective Obesity Counseling

- Communicate with empathy
- Establish a patient-physician partnership
- Deliver counseling effectively
- Be sensitive to bias against overweight and obese individuals

# Establish Treatment Goals

- Prevent further weight gain
- Reduce body weight by 10% over 6 mos
  - About 1 pound / week
- Maintain weight loss

# Patient Readiness Checklist

Acknowledge and work through the issues

- Motivation/Support
- Stressful Life Events
- Psychiatric Issues
- Time Availability/Constraints
- Weight-loss Goals and Expectations

Use questionnaires and handouts



# Increasing Readiness for Change

Help your patients to be receptive

- Perceive susceptibility to health problems associated with elevated weight
- Believe that health problems are serious
- Believe the treatment is effective and not overly costly in regard to money, effort or pain
- Believe they have the skill to make the necessary changes
- Provide exposure to a cue to take health action

# Behavioral Modification Skills

- Self Monitoring
- Stress Management
- Stimulus Control
- Cognitive Restructuring
- Problem Solving
- Contingency Management
- Social Support

# Self Monitoring

- Monitor eating habits using a Food Journal
  - Amount, types and time of food intake
  - Nutrient composition and caloric value
- Monitor activity with a Physical Activity Log
  - Frequency
  - Intensity and or type of activity
  - Duration
- Include time, place, (mood-optional) related to eating and physical activity
  - May reveal unrecognized eating and activity patterns
- Chart your weight on a graph

# Stress Management

- Recognize and Defuse stressful situations leading to overeating
- Change to Positive coping strategies
  - Situation Avoidance
  - “Talk it Out”
  - Use Social Support
  - Use “Assertive Communication”
  - Exercise
  - Meditation
  - Relaxation techniques ex. Yoga

# Stimulus Control

- Identify stimuli that encourage **incidental** eating – then avoid those stimuli
- Learn how to grocery shop carefully
- Keep empty-calorie foods out of your environment
- Limit the times and places of eating
- Dissociate activities from eating
- Recognize and consciously avoid situations in which overeating occurs

# Cognitive Restructuring

- Challenge unrealistic goals and inaccurate beliefs about weight loss and body image
- Focus on attainable mutually acceptable goals
- Develop specific plans for achieving goals
- Believe that success is possible
- Replace self-defeating, fear promoting thoughts and feelings with more realistic, adaptive ones

# Problem Solving

- Learn to Self-correct problem areas related to eating and physical activity
- Identify weight loss challenges
- Generate or brainstorm possible solutions and choose one
- Plan and implement healthy alternatives
- Evaluate the outcome of possible changes and choices

# Contingency Management

- Think about the consequences of actions
  - Continued weight gain
  - Increased disease risk
- Set specific, realistic and forgiving goals
- Be prepared to reassess and start over
- Reward all positive results
  - Rewards other than food, come in many shapes and forms
  - Rewards can be from others or self



# Social Support

- Establish a strong system of social support to facilitate weight reduction
  - Family members, friends or colleagues
  - Weight loss support group
  - Weight loss buddy
  - Command or Department Support

# Non-Adherence to Recommendations

- Do not blame the patient
- Apply problem solving skills
  - Develop strategies for adherence
  - Develop new recommendations
- Employ shaping techniques move *closer* to the desired actions and goals
- Continue to provide encouragement
  - Keep in mind that lifestyle changes are sometimes very challenging

# Continually Re-establish Goals

- Prevent further weight gain
- Reduce body weight by 10% over 6 mos
  - About 1 pound / week
- Maintain weight loss

# Nutrition

# Nothing New Under the Sun



## **CALORIE RESTRICTION**

- Remains the fundamental principle for weight loss in spite of all the fad diets and media hype.



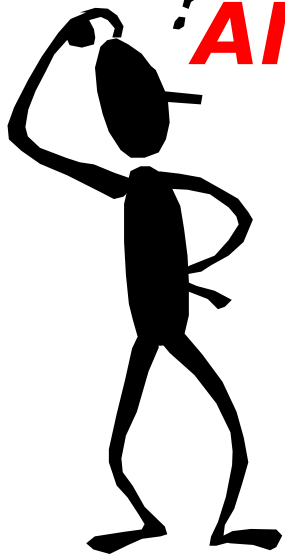
# 3 Nutrition Keys to Weight Loss

- 1. Reduce Calories
- 2. Reduce Fats
- 3. Eat more... Fiber



# When to Recommend Weight Loss

- For BMI between 25 - 29.9  
**OR**
- For BMI  $\geq 30$  **OR**
- For high-waist circumference  
**AND** two or more risk factors.



# Calorie Reduction



- **BMI  $\geq$  25**

Calorie deficit should be 300-500 calories/day resulting in a weight loss of  $\frac{1}{2}$  to 1 pound/week



- **BMI  $\geq$  30**

Calorie deficit should be 500-1000 calories/day with weight loss of 1-2 pounds/week



# Calorie Reduction

## NHLBI Recommendation

- Reduce body weight by 10% from baseline within the first six months of starting the intervention program.

210 pound patient, target is 21 pound loss

Behavior Tip: When dining out down-size food and drinks instead of super-sizing.



# Calorie Reduction

- 1 pound of fat = 3,500 calories
- 1 pound lost = 500 calorie deficit/day x 7 days
- Diet AND Exercise = Calorie deficit
  - Cut back 250 calories + Burn 250 calories
  - 210 cal = Switch from whole to skim milk 3 glasses/day
  - 302 cal = 200 pound person running 6 mph for 20 min

## Behavior Tip

- Use smaller plates to moderate portion size
- Never eat right out of the container
- Eat slowly, allow yourself to *feel* full
- Drink lots of water



# Calorie Reduction

## Sample Daily Reduced Calorie Meal Plan

	1200	1500	1800	2000
Starch	5	6	7	7
Fruit	3	3	3	4
Milk	2	2	3	3
Vegetables	Load Up	Load Up	Load Up	Load Up
Protein (20%)	6oz	7oz	7oz	8oz
Fat/Sweets(25%)	3	4	4	5

## TURKEY SANDWICH

20 Years Ago



320 calories

Today



820 calories

**Calorie Difference: 500 calories**



## Maintaining a Healthy Weight is a Balancing Act Calories In = Calories Out



How long will you have to ride a bike in order to burn those extra calories?\*

**\*Based on 160-pound person**

## Calories In = Calories Out



If you ride a bike for **1 hour and 25 minutes**, you will burn approximately **500 calories**.\*

\*Based on 160-pound person



## SODA

20 Years  
Ago



85 Calories  
6.5 ounces

Today



How many calories  
are in today's portion?

Behavior Tip: Share the super size drink with a

## SODA

20 Years  
Ago



85 Calories  
6.5 ounces

Today



250  
Calories

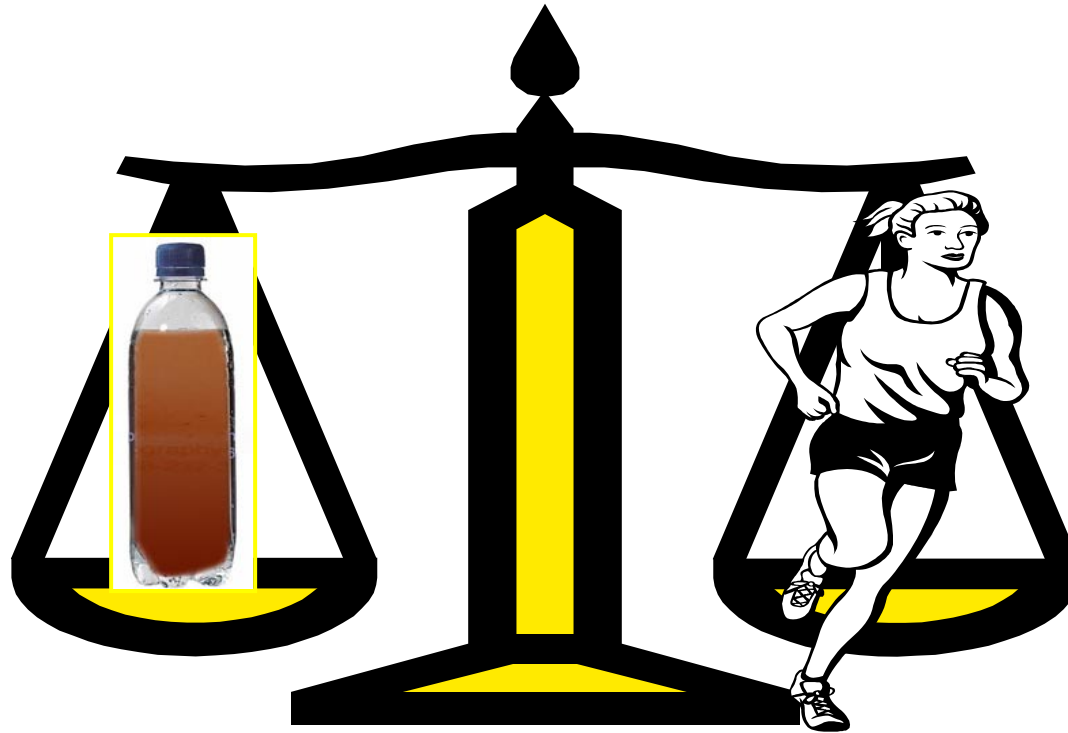
**Calorie Difference: 165**  
**Calories**





# Maintaining a Healthy Weight is a Balancing Act

## Calories In = Calories Out



How long will you have to jog to burn those extra calories?\*

**\*Based on 160-pound person**

# Calorie Reduction

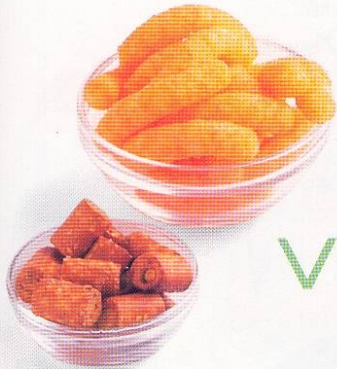
- **Jogging 1.5 miles** will burn **150 calories**
  - less than the extra 165 cal in the large soda
- Other options for exercise/activities:
  - 165 calories = Gardening for 35 minutes
  - 400 calories = Walking for 70 minutes
  - 525 calories = Housecleaning for 2 hours 35 min
  - 210 calories = Raking leaves for 50 minutes

# Calorie Reduction

## Finger Food Snacks

Finger foods lend themselves to after-school snacking, but some choices can carry a high cost in calories. Your kids will have more to munch on—longer—with the snack on the right. And they'll take in some fruit as well!

½ cup Combos 200 calories  
1 cup Cheez Doodles 300 calories  
**TOTAL 500 calories**



VS.

5 cups popcorn 170 calories  
½ lb grapes 100 calories  
**TOTAL 270 calories**



Choose lower fat items. Eat larger amounts for half the calories.  
Behavior Tip: Identify your “guilty pleasures” such as ice cream, cookies or chips and substitute a low fat version.

# How To Burn Calories

## Moderate Physical Activity      Approximate Calories/Hr for a 154 lb Person



- Hiking      370
- Light gardening/yard work      330
- Dancing      330
- Golf (walking and carrying clubs)      330
- Bicycling (<10 mph)      290
- Walking (3.5 mph)      280
- Weight lifting (general light workout)      220
- Stretching      180



Note: A heavier person will burn more calories per hour.

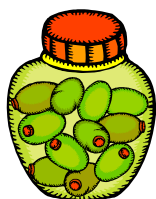
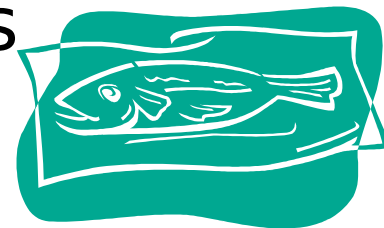
*Tip: Try substituting other activities for eating. Take a walk, dance, bike.*



# Fat Reduction



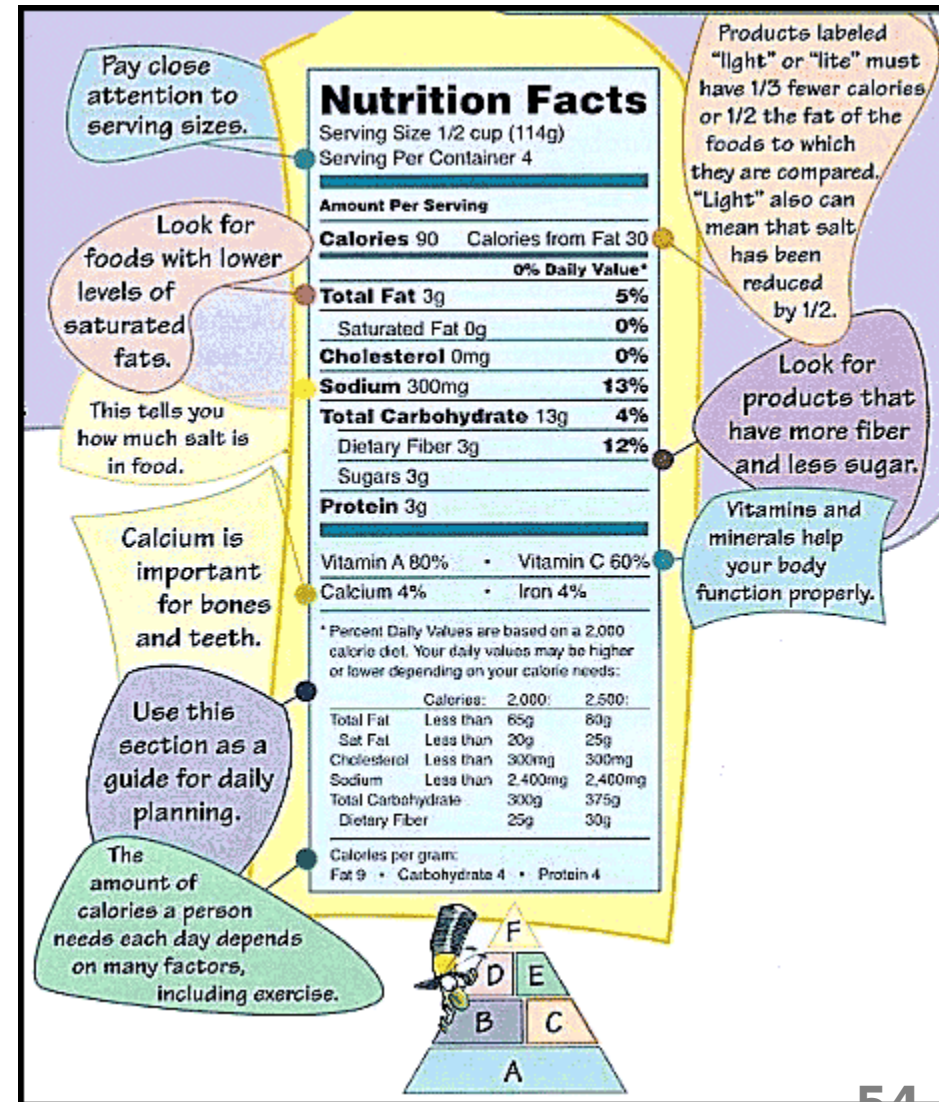
- Why focus on fats vs. other nutrients?
- Fat has greater caloric density
  - Carbohydrates = 4 calories/gram
  - Protein = 4 calories/gram
  - **FAT = 9 calories/gram**
- Reduced fat intake = Weight Loss
  - Substitute lower fat options
  - Skim milk for whole milk
  - Low fat dressing for higher fat versions



# Fat Reduction

Read & understand food labels

- Total Fat Grams should not exceed 3 grams per serving.
- Check number of servings per container.
- Compare similar product labels and choose the lower fat product.
- Be aware of carbohydrates.





# Fat Reduction

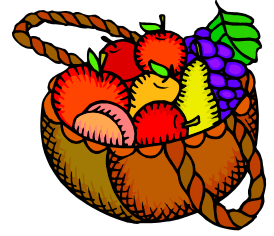
- **Monounsaturated fat**
  - Good for your health.
  - Liquid at room temperature
  - Lowers LDL cholesterol, may exhibit “Anti-inflammatory” properties.
  - Ex: olive and canola oils
- **Polyunsaturated fat**
  - Mixed effects on health .
  - Liquid at room temperature.
  - Lowers both LDL and HDL cholesterol, may be “pro-inflammatory”.
  - Ex: corn, safflower and sunflower oils
- **Saturated fat**
  - Detrimental to health .
  - Solid at room temp, saturated with the max number of hydrogen atoms .
  - Ex: meat fat, whole milk dairy products, coconut & palm oil
- **Hydrogenated fat**
  - Detrimental to health.
  - Results when hydrogen atoms are added to polyunsaturated or monounsaturated fat to prevent rancidity. Creates saturated fats from hydrogenated fats.
  - Partially hydrogenated oils listed among the first three ingredients indicates trans-fatty acids and saturated fat are present.
  - Ex: vegetable shortening, margarines, cookies/crackers made with partially hydrogenated vegetable oils
- **Trans-fatty acids -**
  - Detrimental to health.
  - The fat molecular is changed during hydrogenation from cis- to trans-fatty acids.
  - Trans-fatty acids increase LDL and lower HDL.
  - Ex: Same as hydrogenated fat

# Fat Reduction

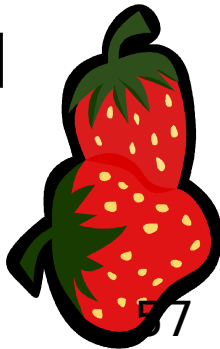
- Limit animal fats
    - Choose plant sources of protein (soy products, grains & beans) over animal sources
  - Eat healthy fat with meals
    - Monounsaturated fats in nuts, olives, avocados, canola, olive and peanut oils
    - Polyunsaturated fats in walnuts, fish and corn oil
  - Use the food label to make better choices
- Behavior Tip: Introduce substitutions slowly and consistently to avoid feeling deprived. The goal is progress not perfection.



# Increase Fiber

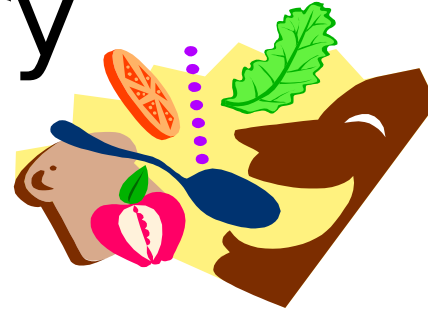


- The message here is EAT MORE.
  - Instead of eating less, recommend more fruits and vegetables
- Eat 5-9 servings per day, (minimum) of fruits, vegetables, whole grain breads/cereals, legumes
- Substitute - don't add- high fiber foods for high calorie foods
- Eat 25-30 grams fiber/day. Use the food label.



# Summary

- Reduce calories
- Use smart diet substitutions
- Substitute low fat for high fat
- Fill up on fiber; increase fruits and vegetables
- Reduce portion sizes
- Increase activity to contribute to overall calorie deficit; don't just reduce food intake
- Encourage small, incremental steps
  - Replace whole milk with 2% or skim
- Read and understand food labels
- Focus on lifestyle changes, not quick fixes



# Maintaining Weight Loss: Behavior Tips from the “Pro’s”

Patients who have successfully lost weight  
and maintained the weight loss

- Weigh themselves regularly once a week
- Keep a food diary to increase their awareness of their eating habits
- Exercise regularly

Reference: The National Weight Control Registry (NWCR) established in 1994, which follows adults who have lost 60+ pounds and maintained the loss for an average of 5.5 years.

**<http://www.NWCR.ws>**

# Physical Fitness

# Discussing Physical Activity and Weight Control

- The Fitness Assessment
  - Use the questionnaires
- Identify barriers
- Assess the perceived benefit of activity
- Assess readiness to change
- Medically screen as needed
- Provide a Physical Activity Prescription
- Teach how to monitor progress
- Refer as needed
- Schedule follow-up

# Fitness Assessment

- Patients complete prior to the appointment:
  - Physical Activity questionnaire
  - Barriers to Physical Activity
  - Physical Activity Time Study
- Review questionnaires and Assess activity pattern
  - Use open-ended questions
- Identify enjoyable activities
  - When and how often do they participate
- Identify barriers to activity

# Fitness Assessment

## **Physical Activity**

- Physical activity is any muscle motion resulting in energy expenditure; occurring in any location or situation
- Any moderate intensity activity performed for 15 minutes or longer is beneficial
- Review the patient's current preferred activities
- Identify the frequency, duration and intensity
- Identify specific additional opportunities during the day / week to spend time engaged in physical activity

# Fitness Assessment

## **Barriers to Physical Activity**

- Discuss challenges and barriers including:
  - Lack of access to recreational facilities +/-or commute
  - Comorbid health conditions caused by excess weight
  - Low self-confidence and body image concerns
  - Poor level of conditioning
- Teach goal setting, problem solving and cognitive restructuring techniques when addressing potential barriers to activity
- Teach your patients how to identify, develop strategies and work through issues



# Fitness Assessment

## **Perceived Risk vs. Benefit**

- Discuss the health risks the patient is experiencing related to their weight
- Discuss the health benefits they can expect to gain:
  - Reduced risk of high blood pressure, Coronary Heart Disease & stroke
  - Reduced risk of certain cancers
  - Reduced risk of T2 DM and improved glucose tolerance
  - Improved lipid profile
  - Reduced incidence of depression and improved mood
  - Lower risk of morbidity and premature mortality than normal weight, sedentary people
- Establish baseline: BP, Lipids and Glucose levels
- Track improvements in baseline labs at F/U appt

# Screening Prior to Initiating Physical Activity

- Moderate-intensity activity is safe for most overweight and obese patients

The AMA recommends exercise testing for patients with:

- Known CVD, including CAD, PVD and CVD
- Known heart murmur
- Known pulmonary disease, including COPD, asthma, interstitial lung disease, and cystic fibrosis
- Known metabolic disease, including Type 1 or 2 DM, thyroid disorders, and renal or liver disease

# Screening Prior to Initiating Physical Activity Continued

The AMA recommends exercise testing for patients with:

- One or more signs or symptoms suggestive of cardiovascular and pulmonary disease, including pain (or any other anginal equivalent) in the chest, neck, jaw, or arms that may be due to ischemia; shortness of breath at rest or with mild exertion; syncope; orthopnea or paroxysmal nocturnal dyspnea; ankle edema; palpitations or tachycardia; intermittent claudication; and unusual fatigue or shortness of breath with usual activities.

# Recommending Physical Activity

- **The goal is 30 min or more of moderate physical activity on most, preferably all, days of the week.**
  - Accumulate benefits in shorter 10-15 minute bouts
  - Encourage **any** increased activity in the daily routine
- Higher levels of activity may be needed
- Physical activity is not associated with rapid weight loss – along with diet, it's a tool for attaining/maintaining weight
- Discuss barriers and work through strategies
- Encourage use of social support and “workout buddies”
- Stress consistency and persistence
- Assist patients in setting realistic goals
- Be prepared to reassess and try again
- Make physical activity a lifestyle change-the daily routine

# Recommending Physical Activity

## **What is Moderate Intensity Physical Activity?**

- During “moderate intensity activity” a person is still able to carry on a conversation comfortably while exercising.
- The heart rate goal is 50-70% of maximum heart rate
  - To calculate:  $220 - \text{age} \times .50$  or  $.70$  would be heart rate min and max.
  - For example, a 50 year old minimum heart rate would be  $220 - 50 = 170 \times .50 = 85$  bpm
- The next slide illustrates what are considered examples of “moderate” intensity activities.
- People can select a variety of enjoyable activities that fit their personal lifestyle.

TABLE IV-4:

**EXAMPLES OF MODERATE AMOUNTS OF ACTIVITY\***

Washing and waxing a car for 45-60 minutes  
 Washing windows or floors for 45-60 minutes  
 Playing volleyball for 45 minutes  
 Playing touch football for 30-45 minutes  
 Gardening for 30-45 minutes  
 Wheeling self in wheelchair for 30-40 minutes  
 Walking 1½ miles in 35 minutes (20 min/mile)  
 Basketball (shooting baskets) for 30 minutes  
 Bicycling 5 miles in 30 minutes  
 Dancing fast (social) for 30 minutes  
 Pushing a stroller 1½ miles in 30 minutes  
 Raking leaves for 30 minutes  
 Walking 2 miles in 30 minutes (15 min/mile)  
 Water aerobics for 30 minutes  
 Swimming laps for 20 minutes  
 Wheelchair basketball for 20 minutes  
 Basketball (playing a game) for 15-20 minutes  
 Bicycling 4 miles in 15 minutes  
 Jumping rope for 15 minutes  
 Running 1½ miles in 15 minutes (10 min/mile)  
 Shoveling snow for 15 minutes  
 Stairwalking for 15 minutes

Less Vigorous,  
More Time \*\*



More Vigorous,  
Less Time

\* A moderate amount of physical activity is roughly equivalent to physical activity that uses approximately 150 calories of energy per day, or 1,000 calories per week.

\*\* Some activities can be performed at various intensities; the suggested durations correspond to expected intensity of effort.

# The Physical Activity Rx

- Provide motivated patients with specific advice on how to begin physical activity
- The “Physical Activity Rx” is a written plan for activity that can safely be achieved in the context of your patient’s present health status. Specify activity details including:
  - frequency
  - intensity
  - duration

# The Physical Activity Rx

- Match activity to the patients' ability and interest
- Set realistic initial goals for duration, intensity and frequency
- Adjust upward as fitness improves
- The initial Rx might state:
  - 20 minutes, of slow pace walking, 3 times per week
- Subsequent Rx may increase the duration, pace, and frequency as tolerated by the patient.



# Pedometer-based Activity Rx



## Prescription For Health



Department of  
Veterans Affairs

Name \_\_\_\_\_

Your Body Mass Index (BMI) is \_\_\_\_\_

Your BMI is considered too high and places you at risk for health problems such as high blood pressure, heart disease, diabetes, and other conditions.

☐ I strongly recommend that you increase your physical activity and use a pedometer to keep track of your progress.

\_\_\_\_\_ Number of steps to aim for most days of the week.

\_\_\_\_\_  
Signature of Healthcare Provider

\_\_\_\_\_  
Date

# Pedometer based-Activity RX

## Pedometer Prescription Guidance for Use

### Method 1

- First, determine current average number of steps/day over a 4-5 day baseline observation period.
- Second, aim to increase daily total by 500-1,000 steps each week.

### Method 2

- Aim goal one level above current "rough" activity level.

<i>Activity Level</i>	<i>Steps/Day</i>
Very sedentary	3,500
Sedentary	5,000
Low active	5,001 - 7,499
Somewhat active	7,500 - 9,999
Active	10,000
Very Active	≥ 12,500

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# Monitor Progress

- Provide pts with a physical activity calendar
- Teach them how to record daily minutes (time), number of steps walked, or number of miles walked and level of intensity.
- Review this calendar at each appointment
- Encourage patients to use a pedometer
  - Goal is 10,000 steps/day (5 miles or 30-60 min)
- Discuss missed opportunities for activity

# Follow-up Visits

- The USPSTF recommends only **high-intensity** intervention
  - person-to-person meetings
  - more than once a month
  - for at least the first 3 months
- Regular f/u is key to long-term weight loss success
- Review BMI and physical activity progress at every appt
- Congratulate pts on weight loss and any beneficial changes in behavior. Encouragement has a huge impact.
- Discuss challenges and strategies to initiating and maintaining physical activity
- Address non-adherence constructively
- Adjust the Physical Activity Rx prn, **schedule another f/u**

# Summary

- Identify excess weight as a health problem
- Review questionnaires during Fitness Assessment and medically screen as needed
- Spend time discussing
  - Adverse health consequences of excess weight gain
  - Beneficial aspects of exercise and weight loss
  - Barriers and strategies to increasing activity
- Write the PA prescription IAW realistic activities
- Follow up and monitor progress to ensure success

# References & Resources

## General Guidance

- Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: Evidence Report. National Heart, Lung, and Blood Institute's (NHLBI) Obesity Education Initiative, June, 1998.  
[http://www.nhlbi.nih.gov/guidelines/obesity/ob\\_home.htm](http://www.nhlbi.nih.gov/guidelines/obesity/ob_home.htm)
- Overweight and Obesity CDC Home page  
<http://www.cdc.gov/nccdphp/dnpa/obesity/>
- USPSTF Screening for Obesity I Adults  
<http://www.ahrq.gov/clinic/uspstf/uspsobes.htm#summary>
- American Medical Association. Assessment and Management of Adult Obesity: A Primer for Physicians. Chicago IL: AMA; 2003. <http://www.ama-assn.org/ama/pub/category/10931.html>
- TRICARE Healthy Choices  
<http://www.tricare.osd.mil/healthychoices/>

## Nutrition

- American Heart Association [www.americanheart.org](http://www.americanheart.org)
- American Dietetic Association, [www.eatright.org](http://www.eatright.org)
- 5 A Day for Better Health Program <http://5aday.gov>

# References & Resources

## Nutrition Continued

- [www.nutrition.gov/home/index/php3](http://www.nutrition.gov/home/index/php3)
- Obesity Education Initiative of NHLBI (contains BMI calculator, portion distortion interactive quiz and interactive menu planner [www.nhlbi.nih.gov/about/oei](http://www.nhlbi.nih.gov/about/oei))

## Physical Activity

- [www.fitness.gov](http://www.fitness.gov)
- [www.acsm.org](http://www.acsm.org)
- [www.presidentschallenge.org](http://www.presidentschallenge.org)
- [www.cdc.gov](http://www.cdc.gov)
- Just Move (info re: fitness, exercise diary and other fitness resources) [www.justmove.org](http://www.justmove.org)

## Clinic Resources

- “I’m Concerned About Your Weight” patient/provider tear off sheet
- Activity Questionnaires
- Nutrition Questionnaires
- Pedometer Basic Guidelines